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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,623	04/22/2004	Toshiharu Furukawa	ROC920040027US1	7307

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IBM CORPORATION
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EXAMINER

FULLER, RODNEY EVAN

ART UNIT	PAPER NUMBER
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2851

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/829,623

Applicant(s)

FURUKAWA ET AL.

Examiner

Rodney E. Fuller

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

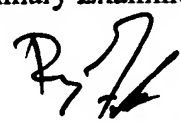
- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Rodney Fuller
Primary Examiner



Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5, 7-11 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Rainer, et al. (DD 224 448 A1).

Regarding claim 1, Rainer discloses "a cover member (Fig. 1, ref.# 9) disposed over the substrate (Fig. 1, ref.# 7) such that a substantially enclosed reservoir (Fig. 1, ref.# 10) is defined between the substrate and said cover member, wherein said cover member includes a top surface contoured to form an open reservoir (Fig. 1, ref.# 14)."

Regarding claim 2, Rainer discloses "wherein said cover member (Fig. 1, ref.# 9) is substantially transparent." (Glasplatten = Glass)

Regarding claim 3, Rainer discloses "wherein said enclosed reservoir contains a first immersion fluid (Fig. 1, ref.# 10)." (Immersionsflüssigkeiten = Immersion Fluid)

Regarding claim 5, Rainer discloses "wherein said open reservoir contains a second immersion fluid (Fig. 1, ref.# 14)."

Regarding claim 7, Rainer discloses "a support platform (Fig. 1, ref.# 11) for upwardly supporting the substrate (Fig. 1, ref.# 7)."

Regarding claim 8, Rainer discloses "a workpiece support member (Fig. 1, ref.# 11); and a cover member (Fig. 1, ref.# 9) disposed over said workpiece support member to form a substantially enclosed workpiece cell (Fig. 1, ref.# 10) between said cover member and said workpiece support member, wherein said cover member is substantially transparent (Fig. 1, ref.# 9 – Glasplatten) and includes an upper surface contoured to form an open reservoir (Fig. 1, ref.# 14)."

Regarding claim 9, Rainer discloses "a workpiece (Fig. 1, ref.# 7) disposed within said workpiece cell (Fig., 1, ref.# 10) and vertically supported by said workpiece support member (Fig. 1, ref.# 11) such that a gap (Fig. 1, ref.# 10) remains between an upper surface of said workpiece and the bottom surface of said cover member."

Regarding claim 10, Rainer discloses "wherein said cover member (Fig. 1, ref.# 9) is substantially planar and has an index of refraction greater than one." (Glassplatten = glass has an index of refraction greater than 1)

Regarding claim 11, Rainer discloses "wherein said workpiece cell contains a first transparent fluid (Fig. 1, are ref.# 10) having an index of refraction greater than 1." (Fluids such as water have an index of refraction greater than 1)

Regarding claim 14, Rainer discloses "wherein said open reservoir contains a second transparent fluid (Fig. 1, ref.# 14) having an index of refraction greater than 1." (Fluids such as water have an index of refraction greater than 1)

Regarding claim 15, Rainer discloses "a lens apparatus disposed over the cover member (Fig. 1, ref.# 9) such that a final lens element (Fig. 1, ref.# 5) of said lens apparatus is positioned within said open reservoir (Fig. 1, ref.# 14)."

Regarding claim 16, Rainer discloses "wherein said final lens element is a lens cover (Fig. 1, ref.# 5)."

3. Claims 1-17, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Bleeker (US 7,009,682).

Regarding claim 1, Bleeker discloses "a cover member (Fig. 2, ref.# 12) disposed over the substrate (Fig. 2, ref.# W) such that a substantially enclosed reservoir (Fig. 2, ref.# 10) is defined between the substrate and said cover member, wherein said cover member includes a top surface contoured to form an open reservoir (Fig. 2, ref.# 11)."

Regarding claim 2, Bleeker discloses "wherein said cover member is substantially transparent." (column 6, line 46)

Regarding claim 3, Bleeker discloses "wherein said enclosed reservoir contains a first immersion fluid (Fig. 2, ref.# 10)."

Regarding claim 4, Bleeker discloses "wherein said first immersion fluid is purified water." (column 3, line 24)

Regarding claim 5, Bleeker discloses "wherein said open reservoir contains a second immersion fluid (Fig. 2, ref.# 11)."

Regarding claim 6, Bleeker discloses "wherein said second immersion fluid is purified water." (column 3, line 24)

Regarding claim 7, Bleeker discloses "a support platform (Fig. 2, ref.# WT) for upwardly supporting the substrate (Fig. 2, ref.# W)."

Regarding claim 8, Bleeker discloses "a workpiece support member (Fig. 2, ref.# WT); and a cover member (Fig. 2, ref.# 12) disposed over said workpiece support member to form a substantially enclosed workpiece cell (Fig. 2, ref.# 10) between said cover member and said workpiece support member, wherein said cover member is substantially transparent (column 6, line 46) and includes an upper surface contoured to form an open reservoir (Fig. 2, ref.# 11)."

Regarding claim 9, Bleeker discloses "a workpiece (Fig. 2, ref.# W) disposed within said workpiece cell (Fig. 2, ref.# 10) and vertically supported by said workpiece support member (Fig. 2, ref.# WT) such that a gap (Fig. 2, ref.# 10) remains between an upper surface of said workpiece and the bottom surface of said cover member."

Regarding claim 10, Bleeker discloses "wherein said cover member (Fig. 2, ref.# 12) is substantially planar and has an index of refraction greater than one (column 6, lines 55-56)."

Regarding claim 11, Bleeker discloses "wherein said workpiece cell contains a first transparent fluid (Fig. 2, ref.# 10) having an index of refraction greater than 1 (column 3, line 24)."

Regarding claim 12, Bleeker discloses "wherein said workpiece cell further comprises fluid ingress means (Fig. 2, ref.# 15) for filling and pressurizing said workpiece cell with a fluid (Fig. 2, ref.# 10)."

Regarding claim 13, Bleeker discloses "wherein said fluid ingress means comprises at least one fluid inlet port (Fig. 2, ref.# 15 – port near ref.# 12)."

Regarding claim 14, Bleeker discloses "wherein said open reservoir contains a second transparent fluid (Fig. 2, ref.# 11) having an index of refraction greater than 1 (column 3, line 24; column 6, lines 55-56)."

Regarding claim 15, Bleeker discloses "a lens apparatus (Fig. 2, ref.# PL) disposed over the cover member (Fig. 2, ref.# 12) such that a final lens element of said lens apparatus is positioned within said open reservoir (Fig. 2, ref.# 11)."

Regarding claim 16, Bleeker discloses "wherein said final lens element is a lens cover." (Fig. 2, ref.# PL – end of lens)

Regarding claim 17, Bleeker discloses "wherein said lens apparatus (Fig. 2, ref.# PL) moves relative to said cover member (Fig. 2, ref.# 12) in a scanning direction (column 2, lines 29-39), said lens cover characterized as having an elongated lengthwise dimension (Fig. 2, ref.# PL – end of lens) oriented in parallel with the scanning direction."

Regarding claim 19, Bleeker discloses a workpiece (Fig. 2, ref.# W) disposed within said workpiece cell (Fig. 2, ref.# 10), and wherein said lens apparatus further includes a workpiece normal focus sensor (Fig. 2, ref.# 14) for determining a correct vertical position of said lens apparatus (Fig. 2, ref.# PL) with respect to said workpiece."

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Regarding claim 20, Bleeker discloses "wherein said lens apparatus (Fig. 2, ref.# PL) further includes a cover member normal focus sensor (Fig. 2, ref.# 14) for determining a correct vertical position of said lens apparatus (Fig. 2, ref.# PL) with respect to said cover member (Fig. 2, ref.# 12)."

Claim Objections

4. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Flagello, et al. (US 6,954,256) and Rainer (DD 221 563 A1) each disclose a cover member disposed over a substrate such that a substantially enclosed reservoir is defined between the substrate and said cover member, wherein said cover member includes a top surface contoured to form an open reservoir.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E. Fuller whose telephone number is 571-272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on 571-272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rodney E Fuller
Primary Examiner
Art Unit 2851

December 19, 2006

A handwritten signature in black ink, appearing to read 'R. E. Fuller', is written over the printed name of the examiner.